

Crows Have Human-Like Intelligence, Author Says

John Roach

for [National Geographic News](#)

June 6, 2006

Crows make tools, play tricks on each other, and caw among kin in a dialect all their own.

These are just some of the signs presented in a recent book that point to an unexpected similarity between the wise birds and humans.

"It's the same kind of consonance we find between bats that can fly and birds that can fly and insects that can fly," said Candace Savage, a nature writer based in Saskatoon, Canada.

"Species don't have to be related for there to have been some purpose, some reason, some evolutionary advantage for acquiring shared characteristics," she added.

Savage's book, *Crows: Encounters with the Wise Guys of the Avian World* (October 2005), explores the burgeoning field of crow research, which suggests that the birds share with humans several hallmarks of higher intelligence, including tool use and sophisticated social behavior.

The shared traits exist despite the fact that crows and humans sit on distinct branches of the genetic tree.

Humans are mammals. Crows are birds, which Savage calls feathered lizards, referring to the theory that birds evolved from dinosaurs.

"I'm not positing there's anything mythological about this or imagining crows are in any way human," she said.

"But whatever it is that has encouraged humans to develop higher intelligence also seems to have been at work on crows."

Tool Use

Alex Kacelnik is a zoologist at Oxford University in England who studies tool use in crows. He said study of the birds advances understanding of how higher intelligence evolves.

As a sign of crows' advanced smarts, Savage cites Kacelnik's 2002 study in the journal *Science* on a captive New Caledonian crow that bent a straight piece of wire into a hook to fetch a bucket of food in a tube.

"No other animal—not even a chimp—has ever spontaneously solved a problem like this, a fact that puts crows in a class with us as toolmakers," Savage writes in her book.

Kacelnik noted that New Caledonian crows, which are restricted to a few islands in the South Pacific Ocean, are the only example of some 45 crow species that "are very intense tool users in nature."

Nevertheless, he continued, these birds are "both intense tool users and creative tool users ... In addition to the tools they are normally seen to use in the wild, they are capable of making new instruments when the necessity arises," such as the wire hooks.

In research published last year in the journal *Nature*, Kacelnik and his colleagues demonstrated that New Caledonians are born toolmakers—that there is a genetic component to the behavior.

The finding, Kacelnik said, fits the notion that higher intelligence requires a genetic imprint to foster more advanced behaviors like learning and innovation.

"There are three elements: what animals inherit, what animals learn by individual experience, and what animals acquire through social input," he said.

"It's a mistake to believe [these elements] compete. Actually, they coalesce, they enhance each other."

Crow Trickery

The intelligence of other crow species, most notably ravens, is also demonstrated by their ability to manipulate the outcomes of their social interactions, according to book author Savage.

For example, she highlights raven research by University of Vermont zoologist Bernd Heinrich showing how juvenile and adult ravens differ when feeding on a carcass.

The juveniles cause a ruckus when feeding to recruit other young ravens to the scene for added safety against competition with adult crows and other scavengers.

The adults, by contrast, show up at a carcass in pairs and keep quiet to avoid drawing attention—and competition—to the food.

Savage also discusses Swiss zoologist Thomas Bugnyar's research showing how a raven named Hugin learned to deceive a more dominant raven named Mugin into looking for cheese morsels in empty containers while Hugin snuck away to raid full containers.

"This shady behavior satisfies the definition of 'tactical', or intentional, deception and admits the raven to an exclusive club of sociable liars that in the past has included only humans and our close primate relatives," Savage writes in her book.

Another area of crow research that may indicate higher intelligence is how crows learn and use sound. Preliminary findings suggest that family groups develop their own sort of personal dialects, according to Savage.

"There's a lot more going on in a bird brain than people ten years ago would have imagined," she said.